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ABSTRACT

This paper compares the self-reported emotion regulation strategies of individuals classified as depressed, depression-vulnerable (formerly-depressed), and never-depressed. Depressed individuals scored significantly higher than never-depressed participants on thought suppression as measured by the White Bear Suppression Inventory. They also scored significantly lower on the Attention, Clarity, and Repair scales of the Trait Meta-Mood Scale (TMMS) and on willingness to self-disclose negative emotions as measured by the Emotional Self-Disclosure Scale. They perceived themselves as less powerful than did never-depressed participants in a remembered sad situation. Depression-vulnerable (formerly-depressed) individuals scored significantly higher than never-depressed participants on thought suppression and significantly lower on TMMS Clarity scale. They also perceived a remembered sad situation as more undesirable than did never-depressed participants. (Contains 19 references and 2 tables.) (JDM)

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Relationship of Emotional Functioning to Depression in College Students

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Poster presented at the Annual Meeting of the American Psychological Association, San Francisco, California, August 24 – 28, 2001

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Abstract

The self-reported emotion regulation strategies of individuals classified as depressed, depression-vulnerable (formerly-depressed), and never-depressed were compared. Depressed individuals scored significantly higher than never-depressed participants on thought suppression as measured by the White Bear Suppression Inventory, and scored significantly lower on the Attention, Clarity, and Repair scales of the Trait Meta-Mood Scale (TMMS) and on willingness to self-disclose negative emotions as measured by the Emotional Self-disclosure Scale. They also perceived themselves as less powerful than did never-depressed participants in a remembered sad situation. Depression-vulnerable (formerly-depressed) individuals scored significantly higher than never-depressed participants on thought suppression and significantly lower on TMMS Clarity. They also perceived a remembered sad situation as more undesirable than did never-depressed participants.

Within the empirical literature on depression, increasing attention has been paid to cognitive models of vulnerability to depression and to understanding the subtle biases in attention, perception, and information-processing that may distinguish depression-vulnerable individuals from those who are less susceptible to depression. This interest has been spurred in part because individuals who suffer a diagnosable episode of depression are at elevated risk for subsequent episodes of depression. Of those who have suffered one episode, 50-60% are expected to suffer another, and the risk rises dramatically with the number of prior episodes (Keller, Lavori, Mueller, Endicott, Coryell, Hirschfeld, & Shea, 1992).

Although there is some evidence that depression-vulnerable (formerly depressed) individuals may continue to exhibit some depressive information-processing biases, the majority of studies comparing depression vulnerable and non vulnerable groups have not found differences on self-report measures of depressive thinking. Once individuals recover from the sad mood and other symptoms of depression they appear, at least on the face of it, to resume "normal" (non negatively biased) thinking patterns (see Ingram, Miranda, & Segal (1998) for a review).

In this paper we explore the notion that depression vulnerability may stem, not only from a greater tendency toward sad emotion or mood, but from particular ways of reacting *to* those emotional experiences once they have occurred. We propose that depression-prone individuals may react to and attempt to regulate their emotions in ways that actually create or exacerbate their vulnerability to becoming depressed. This notion is similar to Teasdale's idea that the experience of being depressed, with all its attendant somatic and psychological experiences, is *itself* depressing to many individuals.

According to this view, depressed individuals are likely to view their symptoms of depression as indications of personal defects and may catastrophize the future course and implications of these symptoms. Our speculation is that for some individuals such reactions may extend to sad moods and other forms of distress in addition to syndromal depression and that such individuals may react to and attempt to regulate their emotions in ways that actually increase their risk of developing depression or maintain existing depression.

Several lines of evidence are consistent with this idea: for example, self-reported depressive thinking is more likely to be observed among formerly depressed (depression vulnerable) individuals when they are in a sad mood (e.g., Miranda & Persons, 1998; Miranda, Persons, & Byers, 1990). These results are typically interpreted as reflecting greater accessibility of depressive schemas/thinking patterns under sad mood. But a slightly different interpretation is also plausible: Depression-prone individuals may react to sad feelings with maladaptive appraisals and mood regulation strategies. In other words, the experience of a sad mood may be the stimulus for a series of appraisals and/or emotion-regulation strategies that initiate depressive thoughts and feelings.

Supporting this notion is Segal, Teasdale, and Williams (1998) finding that an approach they labeled "attentional control mindfulness training" (ACMT) effectively prevents relapse in depression-vulnerable individuals. One way to characterize this training is that it focuses on helping participants change the context - the implied meaning - of their depressive thoughts rather than trying to change the thoughts themselves. In this regard, ACMT training is similar to acceptance-based strategies (c.f.,

Hayes, Strosahl, & Wilson, 1999) that encourage patients to accept and tolerate distressing thoughts and images rather than attempting to alter them.

Hence, there appears to be utility in examining depressed and depression-vulnerable individuals' emotion regulation strategies and appraisals of emotion experience. Emotion regulation, often considered an aspect of emotional intelligence, typically refers to the processes by which individuals maintain, modulate, or transform the nature, intensity, and duration of feeling states (Thompson, 1994). According to Thompson (1990), emotion regulation includes attentional, approach/avoidance and inhibitory mechanisms that operate both consciously and non-consciously. Presumably, the ability to modulate emotional experience underpins virtually all adaptive behavior. Having clear and ready access to one's emotions enhances the richness of life experiences and provides crucial personal and social information, thereby facilitating interpersonal relationships and problem-solving. At the same time, the ability to "tamp down," alter, or put aside strong emotional reactions when necessary would appear crucial to successful relationship functioning and goal-directed behavior. In fact the ability to modulate emotions represents one of the important tasks that children must navigate as they mature from infancy to adulthood.

One approach to understanding such emotion regulation strategies has been taken by Mayer and Salovey and their colleagues (Mayer & Salovey, in press; Mayer, DiPaolo, & Salovey, 1990), who have been interested in how characteristic beliefs about mood influence emotional functioning. Mayer and Gaschke (1988) noted that individuals engage in an ongoing process of reflecting upon, monitoring, evaluating and regulating their feelings. They described three main domains in which individuals respond to their

emotional experiences: monitoring, discriminating among, and regulating moods. These dimensions correspond to three factors that emerged in the development of the Trait Meta-Mood Scale (TMMS; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995): the Attention scale reflects the degree to which respondents' report paying attention to their moods, the Clarity scale reflects reported clarity and lack of confusion about feelings, and the Repair scale purportedly reflects the degree to which respondents attempt to alter negative moods. However, it should be noted that the two items that loaded highest on the Repair scale refer not to strategic attempts to repair negative mood, but rather a fundamentally optimistic outlook.

Salovey et al. (1995) found evidence for the relationship between adaptive functioning and TMMS scales. In their study, depression symptoms as measured by the Center for Epidemiological Studies Depression Scale (CES-D, Radloff, 1977) were inversely related to Clarity about Feelings and Mood Repair and positively related to Attention to Feelings. Although attention to emotional experiences would seem necessary for regulation, depression is typically characterized by a particular type of "over attention" to negative emotions - a ruminative, self-focused style that may have driven the positive correlations found for the Attention scale.

Another approach to emotion regulation has focused on the consequences of mood regulation strategies that entail some degree of distancing or suppression of unpleasant thoughts and emotional experiences. Hayes, Wilson, Gifford, Follette, and Strosahl (1996) have used the term "experiential avoidance" to refer to "the phenomenon that occurs when a person is unwilling to remain in contact with particular private experiences (e.g., body sensations, emotions, thoughts, memories, behavioral

predispositions) and takes steps to alter the form or frequency of these events and the contexts that occasion them (p. 1154)." Hayes et al. argue that many forms of psychopathology are usefully viewed as unhealthy methods of experiential avoidance. This concept is better understood by considering the example of depression that, within this framework, might be viewed as a complex of cognitive and behavioral attempts to withdraw from specific unpleasant experiences and sensations. Hence, the behavioral passivity, emotional numbness, and cognitive impairment characteristic of depression may all be considered part of a strategy to reduce contact with distressing sensations, thoughts, or memories (Hayes & Melancon, 1989).

Hayes et al. (1996) point out that examples of experiential avoidance have been well documented in the stress literature for decades through constructs such as avoidant coping. Avoidant coping has been identified as a factor in self-report coping inventories such as the Coping Inventory for Stressful Situations (CISS) (Endler & Parker, 1990) and Carver, Scheier, and Weintraub's (1989) COPE. CISS items assessing avoidant coping involve either distraction ("watch TV") or social diversion ("phone a friend"). The COPE includes scales measuring behavioral ("I reduce the amount of effort I'm putting into solving the problem"), mental ("I daydream about things other than this", and alcohol-drug disengagement.

While theorists such as Folkman and Lazarus (1988) have suggested that in distressing situations either problem focused or emotion focused strategies might be adaptive, there is also evidence that efforts to simply avoid emotions result in problematic outcomes. While disengaging from a goal is sometimes adaptive, it often interferes with adaptive coping: for example, avoidant coping has been found to negatively predict

outcome for a variety of difficulties, including substance abuse (Ireland, McMahon, Malow, & Kouzekanani, 1994); depression (DeGenova, Patton, Jurich, & MacDermid, 1994; Bruder-Mattson & Hovanitz, 1990) and sequelae of childhood sexual abuse (Leitenberg, Greenwald, & Cado, 1992).

An emerging literature on thought suppression provides another stream of evidence for the negative effects of avoidance-based emotion regulation strategies. Experimental studies have demonstrated that when individuals are asked to suppress a thought they show an increase in the suppressed thought subsequently. This "rebound" effect has been shown to occur most strongly when the individual is exposed to the context (e.g., environmental cues) in which they initially suppressed (e.g., Wegner, Schneider, Knutson, & McMahon, 1991), and when they are in the same mood that they were in during the initial suppression (Wenzlaff, Wegner, & Klein, 1991). Further, Wenzlaff and Bates (2000) showed that instructing participants not to produce negatively valenced solutions on a scrambled sentences task resulted in an increase in negative solutions when the task was done under cognitive load. In addition, studies have found high self-reported rates of thought suppression on Wegner and Zanakos' (1994) White Bear Suppression Inventory in both depressed and depression-vulnerable individuals (Rude, Wenzlaff, Gibbs, Vane, & Whitney, in press; Wenzlaff, 1993).

Further support for the relationship of suppression strategies to psychopathology has been provided by research showing the benefits to mental health of emotional expression. Pennebaker (e.g., 1990, 1993) has consistently demonstrated health benefits from an experimental manipulation in which participants articulate their emotional experiences. In his typical paradigm, Pennebaker instructs participants to express in

writing their "deepest thoughts and feelings" about a distressing event or situation. Across varying paradigms and measures of well-being, the effect of this manipulation has proved robust: Compared to control conditions involving either writing without emotion about the event or writing about a trivial topic, emotional writing has been associated with improved immunological functioning and reduced doctor visits, better grade point average and re-employment in unemployed engineers. It is not known how depressed or depression-prone individuals compare to less vulnerable individuals in the degree to which they express emotions, but there is evidence that ambivalence about expressing emotions on the Ambivalence about Emotional Expressiveness Questionnaire (AEQ; King & Emmons, 1990; 1991) is related to daily negative moods and to depressive symptomatology.

Yet another construct that is relevant to emotion regulation is the appraisal of emotionally evocative situations. In a series of studies, Roseman and his colleagues (Roseman, 1984; Roseman, Spindel, & Jose, 1990; Roseman, 1991; Roseman, Dhawan, Rettek, Naidu, & Thapa, 1995) found that discrete emotions could be reliably differentiated according to specific dimensions of cognitive appraisals of events. While numerous appraisal dimensions and emotions are included in Roseman's theory, the following dimensions were deemed most relevant to the current study: *desirability,* (what Roseman has termed *situational state)*, an appraisal of whether an event is consistent or inconsistent with one's desires; *power*, the degree to which individuals believe they are capable of coping with a given situation; *legitimacy*, which refers to whether or not individuals believe they deserved for an event to happen; and *agency of self*, the degree to which an event is perceived as caused by oneself.

Examining these appraisal dimensions may offer insights into how individuals react to themselves within contexts that evoke particular emotional states (sadness-inducing or fear-inducing situations, for example). These initial appraisals of emotionally evocative situations may be precursors of strategies that individuals then employ to cope with or modify their emotional experiences.

The interest of the present study was in comparing the emotion regulation strategies and cognitive appraisals of sadness of individuals who were depressed and those who were vulnerable to depression, though not currently depressed, with a control group of individuals less vulnerable to depression. Our prediction was that emotion regulation styles characterized by thought-suppression and inattention to or vagueness about emotional experience as well as a lack of disclosure of negative emotions would be associated with depression. Further, we predicted that depressed participants would, in reflecting upon a recent situation in which they had felt sadness, appraise the situation as more aversive, themselves as less powerful, less deserving, and more to blame. And, since we theorized that these emotion regulation strategies play a role in bringing about depression (and are not just a concomitant of depressed mood), we predicted that the above pattern would be observed for depression-vulnerable individuals.

Methods

Participants and Procedures

Participants were 111 female and 21 male undergraduate students (mean age = 19 years) who comprised part of the sample in a larger investigation (see Rude, Wenzlaff, Gibbs, Vane, & Whitney, in press). Participants were selected for the present study

according to their scores on self-report measures of current and past depression symptoms. The currently-depressed group was defined by scores of 14 or higher on the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). Beck (1967) has suggested a score of 14 on the BDI as a cut-off for mild depression. A criterion for placement in the never- and formerly-depressed groups was a score less than 7. The latter two groups were further defined by their scores on the Inventory to Diagnose Depression-Lifetime (IDD-L; Zimmerman & Coryell, 1987), a measure that assesses past incidents of depression (see below). A score above 25 on the IDD-L further defined the formerly-depressed group and an IDD-L score below 9 defined the never-depressed group. Established norms for the IDD-L have not been reported, but within the larger sample of approximately 400 participants from which these participants were drawn, 45% fell below an IDD-L score of 9 and 25% fell above an IDD-L score of 25.

Once constituted in this manner, the currently-, formerly-, and never-depressed groups consisted of 40, 33, and 90 participants, respectively. Since the formerly- and never-depressed groups were disproportionately comprised of women, the proportions of men and women in each group were equated by randomly deleting participants so that the proportion of men in each group was 20%. This proportion was chosen because it maximized both the number of males and the total number of participants in the formerly- and currently-depressed groups. The final sample consisted of 133 participants: 31(26 women and 5 men) in both the depressed and depression-vulnerable groups, and 71 (59 women and 12 men) in the never-depressed group.

Instrumentation

Participants were recruited from an introductory psychology class and were administered the following measures:

White Bear Suppression Index (WBSI; Wegner & Zanakos, 1994). This is a 15-item measure of the tendency to suppress unpleasant thoughts. The authors report test-retest reliability estimates ranging from .69 to .92 for scores on the WBSI over time periods ranging from one week to three months. Cronbach's alphas for scores on this instrument are reported for five samples of undergraduate students and range between .87 and .89 (Wegner & Zanakos, 1994).

Convergent validity for scores on the WBSI is supported by correlations with self-reports of obsessive thinking (ranging from .38 to .40), depression (.44 to .52) and anxiety (.49 to .58) (Wegner & Zanakos, 1994). The authors also investigated the usefulness of scores from the WBSI as a predictor of clinical obsession and depression and found significant correlations ranging from .25 to .43 for obsession and .49 for depression.

Trait Meta-Mood Scale (TMMS; Salovey et al., 1995). Reflective experience of mood was measured by the TMMS, a 30-item instrument to which participants responded on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*). It includes three subscales measuring enduring aspects of the reflective experience of mood. The authors labeled the scale measuring tendencies to attend to moods *Attention TMMS*; it included items such as "The best way for me to handle my feelings is to experience them to the fullest." The scale for measuring the ability to discriminate among feelings was labeled *Clarity TMMS*; one item was "I am rarely confused about how I feel." The authors assigned the label

Repair TMMS to the scale measuring the ability to regulate feelings, which included items such as "I try to think good thoughts no matter how badly I feel." Salovey et al. (1995) found the Cronbach's alpha for these scales to vary from .82 to .87. Mayer and Stevens (1994) found evidence that the TMMS scales were related to criterion variables such as coping behaviors and personality functioning.

Emotional Self-disclosure Scale (Snell, Miller, & Belk, 1988). This scale asks respondents to rate their willingness to disclose emotions to a male friend, a female friend, and a romantic partner. Each emotion is represented by five items (e.g., "Times when you felt scared" and "Times when you felt alarmed"). Snell et al. (1988) reported adequate levels of internal consistency and test-retest reliability and Snell, Miller, Belk, Garcia-Falconi, & Hernandez-Sanchez (1989) reported good validity in predicting aspects of gender roles and cultural background. For the present study a single index of emotional expression was created by summing across the six negative emotion scales (depression, jealous, anxiety, anger, apathy, and fear) and across the three targets (male friend, female friend, and romantic partner).

Cognitive appraisals (Roseman et al., 1990). Cognitive appraisals of sadness experiences were measured using questions developed by Roseman et al. (1990). The questions used in this study were slightly modified from those used by Roseman et al. (1990) in that participants were specifically asked to write about the last time they experienced an event that involved sadness. In order to facilitate recall of the event, participants were next asked, "What was it in the situation you just described that directly caused you to feel sadness?" Each appraisal dimension in the Roseman et al. (1990) model was measured on a five-point scale. Three items each assessed the desirability or

undesirability of the event (*desirability; e.g.,* "At the time, did you think of this event as consistent with what you wanted, or inconsistent with what you wanted?"), and the degree to which individuals believe they were capable of coping with the event (*power; e.g.,* "Did you believe that you were weak or strong?"); two items assessed whether or not individuals believed they deserved for the event to happen (*legitimacy*; e.g., "During the event did you think of yourself as morally right or morally wrong?"); and one item assessed the extent to which they appraised themselves as the cause of the event (*self-agency;* "At the time, how much did you think that the sadness event was caused by you?").

Questions were ordered randomly on the questionnaire. Roseman et al. (1990) found the coefficient alphas for the scales to be .63 for legitimacy, .86 for situational state, and .74 for power. The agency-self dimension was assessed with only one item. Similar coefficient alphas were found using Roseman et al.'s (1990) scales by McCarthy, Brack, Brack, Liu, and Carlson (1998).

Results

Correlations among the variables used in this study are presented in Table 1. As can be seen, the emotion regulation subscales of the TMMS were significantly and positively correlated (rs between .45 and .59). On the other hand, participants' appraisals of a recent sad situation from Roseman et al.'s (1990) questionnaire were not correlated, which is to be expected since the Roseman dimensions are intended to tap separate dimensions. Other correlations shown in Table 1 support the validity of the constructs employed: Willingness to disclose negative emotions, as measured by the ESDS, was positively correlated with the TMMS subscales, and the highest of these correlations was

between the ESDS and the Attention subscale. It seems reasonable that individuals who are very attentive to their feelings would also be especially inclined to express them to certain others. Reported tendency to suppress negative thoughts (WBSI score) was negatively correlated with reported clarity and tendency to repair those thoughts as measured by the TMMS.

Scores on each of the emotion regulation/cognitive appraisal variables were compared between the groups using a series of one way analyses of variance with two planned contrasts. The never-depressed group was compared to the currently depressed group and then to the formerly-depressed group in separate contrasts.[1]

Means and standard deviations on each variable for each of the three groups are presented in Table 2, along with an indication of which contrasts were significant. As expected, depressed as compared to never-depressed participants scored significantly higher on thought suppression (WBSI), ($t(130) = -6.95$, $p < .001$), and significantly lower on the TMMS Attention, Clarity, and Repair subscales; $t(130) = 3.58$, $p < .001$; $t(130) = 5.58$, $p < .001$; $t(130) = 7.28$, $p < .001$, respectively) and willingness to self-disclose negative emotions (ESDS) ($t(119) = 2.97$, $p = .004$). Of the appraisals participants made regarding a specific sadness experience, only the "power" appraisal showed a significant group difference—depressed participants appraised themselves as less powerful in the sadness situation than did never-depressed participants ($t(126) = 4.03$, $p < .001$).

With regard to the second set of contrasts, depression-vulnerable participants scored significantly higher than never-depressed participants on thought suppression (WBSI) ($t(130) = -3.72$, $p < .001$), and lower on the TMMS Clarity and Repair

subscales; t (130) = 3.29, p = .001; t (130) = 2.33, p = .02 respectively). Of the appraisals regarding their sadness experience, only the perceived undesirability of the situation was significantly lower for depression-vulnerable compared to never-depressed participants (t (125) = -2.66, p = .009).

Discussion

The results of this study represent a first step in the mapping of emotion regulation strategies and cognitive appraisals of sadness-eliciting events among depressed and depression-vulnerable individuals. The comparisons between depressed and never-depressed participants were clear in showing less adaptive emotion regulation patterns among depressed participants. These results are consistent with the notion that these emotion regulation/appraisal practices contribute to the likelihood of developing depression. However, it should be noted that the emotion-regulation strategies and appraisals used by depressed individuals may stem from the greater distress experienced by this group.

In the second set of comparisons, depression-vulnerable (formerly-depressed) participants reported more thought suppression, less clarity about their feelings, and less tendency to repair their feelings than did less vulnerable (never-depressed) participants. The thought suppression finding is consistent with findings reported by Wenzlaff (e.g., 1993) and by Rude, Wenzlaff, Gibbs, Vane, & Whitney, in press) of elevated rates of self-reported thought suppression among depression-vulnerable as well as depressed individuals.

The depression-vulnerable and less-vulnerable groups differed in their history of depression symptoms—and hence in their probability of becoming depressed in the

future—but did not differ in their current symptoms of depression. Hence, differences between these groups cannot be attributed to current dysphoria. This allows a relatively strong inference to be made about the causal role of thought suppression and clarity about feelings in bringing about depression. However, in order to further the basis for a causal claim for these emotion regulation strategies, prospective data are needed. The formerly-depressed participants studied here are considered vulnerable because, as a group, they can be expected to become depressed at higher rates in the future than the group of never-depressed participants. But not all will become depressed and some within the group are likely to experience frequent and severe bouts of depression. If future research can establish that individuals who report greater thought suppression and less clarity are indeed at greater risk for future depression, the claim for a causal role of these variables will be strengthened.

A caveat to these results is that nine variables were compared, thus raising the possibility that chance contributed to the significant findings. In light of this it should be noted that the significant group differences reported here were associated with very low probability levels. If a Bonferroni correction, adjusting for nine statistical tests, is applied, the p value criterion that each individual test must meet in order to maintain an experiment-wide error rate of .05 is $p < .006$. All the significant differences reported here except one remain significant using this criterion. Only the difference between depression-vulnerable and never-depressed participants on TMMS Repair ($p = .02$) falls outside the adjusted significance level.

In the present study depression-vulnerable participants' willingness to disclose negative emotions, TMMS attention scores, and the self-agency, legitimacy, and power

dimensions of their appraisals of sadness did not differ from those of less-vulnerable participants. However, these data should not be construed as conclusive in indicating a lack of relevance of these variables to depression vulnerability. The power of the present study to detect group differences was limited by the relatively small sample size and by the use of non clinical groups. Further, the fact that depression-vulnerability was defined in a relatively nonstringent manner is important. First, since these participants were quite young, it is likely that a number of those in the never-depressed group will develop depression in the future and are, in fact, depression-vulnerable. In addition, the cut-off used for the measure of past depression symptoms, the IDD-L, was not extremely restrictive—25% of the total sample scored above the cut-off. Finally, severity of past depression symptoms but not the number of past depressive episodes was assessed. It is well established that depression vulnerability increases as the number of past depressions increases, and other researchers (Rude, Covich, Jarrold, Hedlund, & Zentner, in press; Segal et al., 1999) have reported that differences between formerly- and never-depressed groups may only be significant when formerly-depressed participants are limited to those who have experienced multiple episodes of depression.

In conclusion, these results offer preliminary support for the notion that problematic emotion regulation strategies and appraisal patterns are not only associated with depression but may be implicated in vulnerability to depression. However, prospective evidence is required before conclusions can be drawn about causality. The present results have potentially important theoretical and practical implications. As Gross and Munoz (1995, p. 159) have speculated, "...individuals who have learned to regulate their emotions should have a lower probability of becoming depressed than those

who lack such a capacity." If prospective data support the functional role of emotion regulation in bringing about and/or maintaining depression then an important avenue is opened for both the treatment and prevention of depression.

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Footnote

[1] The BDI scores (M= 3.87) of formerly-depressed participants were slightly but significantly higher than those of never-depressed participants (M= 3.06; t = 2.35 , p = .02) despite the fact that both groups were selected to have low current depression scores (BDI < 6.). Therefore the contrasts between these two groups were also performed with the inclusion of BDI score as a covariate. The analyses with this covariate showed the same pattern of statistically significant results as did the analyses performed without the covariate.

The balancing of the three groups on proportion of males and females reduces the likelihood that gender effects might influence the results. But as an additional check, against this possibility, the ANOVA comparisons reported here were also performed on the women only (insufficient numbers of men were available to assess group differences). The pattern of results in these analyses showed the same pattern of statistical significance as was observed for the whole sample.

Table 1

Intercorrelation Matrix for Emotion Regulation and Appraisal Measures

Scales	Appraisal Legitimacy	Appraisal Power	Appraisal Desirability	Appraisal Self-Agency	TMMS-Attention	TMMS-Clarity	TMMS-Repair	WBSI
Appraisal Power	.07							
Appraisal Desirability	-.02	-.03						
Appraisal Self-Agency	-.10	-.16	-.16					
TMMS-Attention	.11	.19*	.03	.04				
TMMS-Clarity	.12	.30**	-.16	.01	.48**			
TMMS-Repair	.18*	.24**	-.18*	-.01	.45**	.59**		
WBSI	-.09	-.13	-.02	.13	-.16	-.51**	-.42**	
Emotional Self Disclosure	.16	.04	.11	-.05	.45**	.23*	.28**	-.16

Note. * $p < .05$. ** $p < .01$.

Table 2

Means and Standard Deviations for Study Measures by Depression Status

Scales	Depression		
	Never M (SD)	Former M (SD)	Current M (SD)
White Bear Suppression	46.04 (8.72)	53.03*** (9.07)	59.10*** (8.41)
TMMS-Attention	51.86 (6.86)	51.23 (7.21)	46.55*** (6.62)
TMMS-Clarity	40.62 (6.85)	35.45** (7.78)	31.87*** (7.75)
TMMS-Repair	24.20 (3.79)	22.00* (4.72)	17.23** (5.46)
Emotional Self Disclosure	354.65 (70.39)	364.60 (68.42)	304.65** (81.74)
Appraisal Power	5.96 (1.23)	5.62 (1.45)	4.83*** (1.18)
Appraisal Desirability	6.41 (1.69)	7.42* (1.92)	7.06 (1.65)
Appraisal Legitimacy	5.53 (1.28)	5.18 (1.42)	4.91 (1.87)
Appraisal Self -Agency	4.33 (3.03)	4.65 (3.23)	5.24 (2.76)

Table continues

Table 2 (continued)

Means and Standard Deviations for Study Measures by Depression Status

Note: * denotes that this group's score is significantly different from the never depressed group at $p < .05$; ** denotes that this group's score is significantly different from the never depressed group at $p < .01$; *** denotes that this group's score is significantly different from the never depressed group at $p < .01$; TMMS = Trait Meta-Mood Scale.